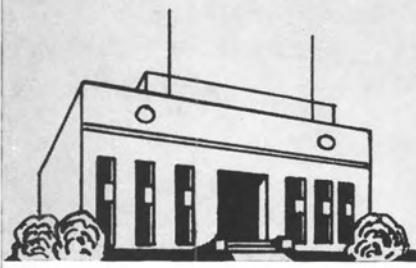

MUSEUM SERVICE

Bulletin of the
Rochester Museum of Arts and Sciences

VOL. 35 NO. 1 • JANUARY 1962

MUSEUM SERVICE

Bulletin of the Rochester Museum of Arts and Sciences

Volume 35 January 1962 Number 1

Rochester Museum of Arts and Sciences — *Dedicated to a Better Understanding of the Laws of Nature and the Cultural Achievements of Mankind* — is administered by the Municipal Museum Commission for the City of Rochester.

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Cover Picture—

In this year, 1962, as we approach the 50th anniversary of the founding of the Museum by Major Hiram Edgerton, which will be celebrated in the fall, it is especially significant to feature both on the front cover and on the back cover illustrations symbolizing the Space Age.

The front cover is a dramatic portrayal of the Star Trails of the Constellation of Orion photographed by Paul W. Davis, Fellow of Rochester Museum. And the Museum's new telescope, the Harvey 4" Refractor, photographed by George T. Keene, Fellow of Rochester Museum, is shown on the back cover. Articles by Mr. Davis and Mr. Keene describe this phenomenon and the telescope, which will play a predominant part in the Museum's program of the physical sciences.

A Milestone In Museum's History

The damp, overcast evening of November 18th was, in spite of the weather, a most auspicious occasion. It marked the dedication of a telescope installation on the roof of the Museum. More than thirty-five adults and young people, including Mrs. Homer A. Harvey and a representation from the Astronomy Section of the Rochester Academy of Science, were on hand to witness the unveiling of a beautiful, polished brass, 4-inch refractor, given by Mrs. Harvey, of Canandaigua, in memory of her late husband.

In addition, the occasion marked a milestone in the history of the Rochester Museum of Arts and Sciences. Here is the first tangible evidence of the Museum's plans to build a Science Center which will include the physical sciences as well as the present natural science, anthropology and culture history. Here is the first component of the physical sciences unit, which in several years will also include a planetarium.

The Harvey Refractor, as the telescope will be known, will offer the public, and particularly the young people of Rochester, an opportunity to get better acquainted with the stars and planets which light the skies over Rochester on clear nights. Here, at last, is a public telescope available to all the citizens of the community.

This installation should instill in the school children of the area a heightened interest in, as well as increased knowledge of things astronomical. Through the use of this instrument, the children's curiosity about the heavens can be satisfied and answers to their questions supplied by talented amateur astronomers.

The Astronomy Section of the Rochester Academy of Science will take charge of monthly "Star Parties" for the public on the first Friday of each month at 9:30 p.m., weather permitting. If the telescope viewing is not good on the scheduled nights, a slide showing of astronomical subjects will be substituted. Special evenings for scout groups and others will be arranged on request.

We feel that this is a realistic beginning to our overall plans for a Science Center containing a Planetarium and physical science exhibits. We are proud of this new service among many offered by the Rochester Museum of Arts and Sciences. We regard it as a good omen of expanded services to follow. Watch for them. Help plan for them!

Keep your eyes on the stars for expanded horizons of knowledge and interest. May we wish you good star hunting in the New Year, 1962.

—GLORIA C. GOSSLING, *Head of School Service Division*

The Harvey Refractor

A MAJOR ADDITION to the astronomy program at the Rochester Museum of Arts and Sciences was the acquisition this fall of a 4" refractor. This telescope belonged to Dr. Homer A. Harvey, of Canandaigua, and was given to the Museum by his widow. It is a fine instrument made in the late 1920's by W. D. Mogey, of Plainfield, New Jersey. After refurbishing by the Astronomy Section of the Rochester Academy of Science and by Bausch & Lomb Incorporated, the telescope was housed in a roll-off building on the roof adjacent to the third floor meeting room.

Dr. Harvey was a man of many talents, and used the telescope to illustrate his public classes in astronomy. He also designed and used many other teaching aids in explaining the wonders of the heavens to his audiences. However, when the Museum acquired the telescope it had been unused for several years. Bausch & Lomb offered to polish and relacquer the brass tube while members of the Astronomy Section carefully cleaned the optics, fitting a new lens in the finder and a new prism in the star diagonal. The bulky gravity-operated clock drive was replaced by a modern electric motor unit which allows the telescope to follow the stars continuously during an observing session. A coat of light blue paint finished the job, and after careful reassembly the telescope was found to perform perfectly. Double stars were resolved down to one second of arc showing that the telescope will separate two equal points of light only one-third inch apart at a distance of one mile.

About forty people gathered under an overcast November sky for the dedication of the telescope. Hopefully, the skies will be clear on the first Friday of each month when the Astronomy Section meets and operates the telescope for public observing. With better weather in the spring and summer, astronomy club members plan to open the telescope for public use more frequently, possibly once a week. Groups desiring special showings should make arrangements with the Museum or the Academy of Science.

Because of its small aperture and its location in the city lights, the refractor is best suited for observations of brighter objects such as the moon and planets. Two eyepieces and a Barlow lens give magnifications from 50X to 290X, and a projection screen for viewing sunspots and other solar activity is now being constructed.

When the new Science Center and Planetarium are completed, the stars may be viewed even in cloudy weather. This building will also contain shops for making the optics and metal parts for reflecting telescopes, giving Rochester a unit for the study of astronomy that will be second to none. Until that day, however the new Harvey refractor will be put to good use as the first step in our community program in astronomy.

—GEORGE T. KEENE, F.R.M.
President
Rochester Academy of Science

Star Trails of the Constellation of Orion

By Paul W. Davis, F.R.M., *Member, Astronomy Section, Rochester Academy of Science*

LOOKING UPWARD toward the southern sky on a clear, moonless night around 8:00 p.m. early in January, we can watch the constellation of Orion in its majestic sweep across our sky. This constellation is considered by most observers the finest grouping of stars in the heavens; it is the most brilliant and delights the eyes of all beholders. With the exception of the Big Dipper, it is best known of all the star groups.

A vast amount of folk lore and mythology relates to Orion. Homer describes Orion as the tallest and most beautiful of men and it is said that he claimed superiority over all creatures on earth. The Gods punished his conceit by sending a scorpion to attack him causing his death. Then at Diana's request he was transported to the heavens.

The most interesting star is the ruddy Giant Betelgeuse *(upper left trail on the front cover)*, one of the largest of all known stars. It is 27,000,000 times in volume greater than our sun. If it were as close to our earth as our sun it would more than completely fill the sky. Betelgeuse is 440 light years away. A light year measures approximately six trillion miles.

One of the most remarkable of all objects in the sky is the Orion Nebula *(red trail just below right center on front cover)*. Volumes have been written concerning it. It was first mentioned by a Swiss, named Cysatus, in 1618, and it has been under observation ever since. It is differently constructed than the Spiral Nebula, like the great one in the constellation of Andromeda. The spirals are vast systems of suns, such as our own galaxy, while the nebula in Orion is a mass of luminous gas so large that its width is 800,000 times the distance from our earth to the sun which is 93,000,000 miles away. It is separated from us by 1,800 light years and its mass is 30,000 times greater than our sun. This nebula viewed through a low-powered eyepiece of a telescope, with an aperture from 5″ to 12″, is a glorious and wonderful sight. It is said that through a large observatory telescope words fail to describe its beauty. To those who take keen delight in the magnificent things encountered in nature this nebula ranks one of the foremost.

The next star of distinction in Orion is Rigel *(brightest white trail below the nebula on the front cover)*. It is the brightest star we know of, not to our eyes but in reality. The distance from earth is 28,000 light years and it is estimated 14,000 times as bright as our sun.

The photograph on the front cover was taken at F-2 aperture with the camera mounted on a tripod using Eastman Kodak High Speed Ektachrome 35 mm film. The stars were photographed for one minute, then the lens was covered for four minutes to allow for dark sky separation before starting to expose for star trails. Time exposure of the star trails was three hours.

Another Prehistoric Iroquois Site In the Bristol Hills, New York

By Charles F. Hayes, III, *Associate Curator of Anthropology*

THE 1961 FIELD SEASON found the anthropology division of the Rochester Museum of Arts and Sciences concentrating its efforts once again upon the dispersal of the Prehistoric Iroquois sites so numerous in the Bristol Hills area of western New York. Two significant investigations were made prior to the last season by Dr. Alfred K. Guthe, former curator of anthropology at Rochester Museum of Arts and Sciences, the author, and members of the Lewis Henry Morgan Chapter of the New York State Archeological Association.

In 1954, Dr. Guthe and Morgan Chapter members excavated at the Hummel Site (Can 23-3) and in 1959, Dr. Guthe and the author dug at the Fletcher Site (Can 28-3) for three weeks. The latter site had been test pitted by Dr. William A. Ritchie and party in 1948. Can 29-3, as the latest site is designated, was excavated for three weeks during July 1961 under the direction of the author and with the assistance of Dr. Francis Turner and Mr. Daniel M. Barber, Morgan Chapter members. Two other sites, the Wheeler Site (Can 12-3) and the Andrews Site (Can 5-4), lie within the immediate area. They have not been extensively tested, but surface indications suggest that they may be related to the above three major sites.

At the request of Mr. Alton Parker, of Spencerport, New York, also a Morgan Chapter member, the Rochester Museum of Arts and Sciences was asked to conduct test excavations at this newly found site evidently untouched by the ubiquitous pot-hunter. This test was accomplished by Dr. Guthe and the author in the summer of 1960 and the conclusion was reached that some day a proper archeological sample should be taken in order to add to the already existing Hummel and Fletcher materials in the Museum's collections. Mr. Parker kindly consented to this project being the major effort for 1961. A total of 20 five-foot squares was uncovered at strategic spots on both east and west sides of the site. No attempt was made at the time to investigate settlement patterns in detail because of the lack of personnel and the difficulty in determining post mold patterns in the suspected village area. Mr. Parker, however, has been working in one area that may prove to be fruitful in the future.

All these sites are located between 1000′ and 1300′ elevations in the Bristol Hills overlooking the Bristol Valley. At present the Fletcher Site is under cultivation. Can 29-3 and the Hummel Site are, however, in areas primarily of second growth timber. The importance of these sites and their interrelatedness has been recognized (Guthe 1960:16). More adequate cultural samples were needed before any valid postulates could be made as to the relationship of Bristol area to the Seneca and early Iroquoian development in general throughout New York State. In other words, was this area one of

Outlining the eastern palisade line.

Pins mark post molds.

Can 29-3

several centers of Iroquoian development? This was the question which prompted further investigations.

Can 29-3 was found to be approximately 400′ long and 200′ wide extending nearly northeast-southwest along a ridge. The western side of the ridge drops off sharply, whereas the eastern side has a more gentle slope. The area of occupation on all of these sites is about the same and the artifacts are scattered, as evidenced by intermittent concentrations of shallow refuse. Excavations at Can 29-3 began in one of these darkened areas on the west slope. A series of five-foot squares was laid out extending over twenty-five feet of promising territory. The artifactual material unearthed in the 3-9 inches of dark loam topsoil was considerable. In some cases five pounds of pottery per five-foot square were recovered. After scraping down the surface of the subsoil indications of a palisade were found. Post molds ran in a nearly straight line along the side of the ridge and the artifacts appeared to have accumulated on the inside. Cross sections of the post molds indicated they were tapered to a point, extended 12 to 21 inches below the top of the subsoil and had diameters ranging from 2 to 9 inches. The posts were spaced from 3-6 inches apart.

Later in the season operations were shifted to the eastern slope of the site and five-foot squares again laid out over obvious darkened areas. A palisade line was encountered as on the western slope and running in the same direction. Cross sections of these molds, however, showed blunted ends. They extended from 9-25 inches below the top of the subsoil, had diameters from 3-12 inches and were spaced the same as those on the west side. Both palisade lines had evidence of the use of small stones to bolster some of the posts. A considerable number of molds contained bits of refuse bone, pottery and flint chips.

The artifacts excavated at Can 29-3 which are currently being catalogued and analyzed include typical Prehistoric Iroquois types. The projectile points are primarily a small thin triangular variety now referred to as Madison points (Ritchie 1961*b*:33). Two atypical points one of which is serrated were also found. A stone celt and an adze were recovered as well as numerous

sandstone hammerstones and anvilstones often in association with many flint chips. Occasional fossil shells were also present.

In one area a concentration of turtle shell fragments produced one fragment with a drilled hole probably indicating the presence of a small hand rattle. Other bone artifacts include awls, polished bone beads and pierced phalangeal cones. A significant amount of refuse bone was found in and around broken pottery vessels and will be submitted to Mr. John Guilday, Section of Mammals, Carnegie Museum, Pittsburgh, Pennsylvania for analysis.

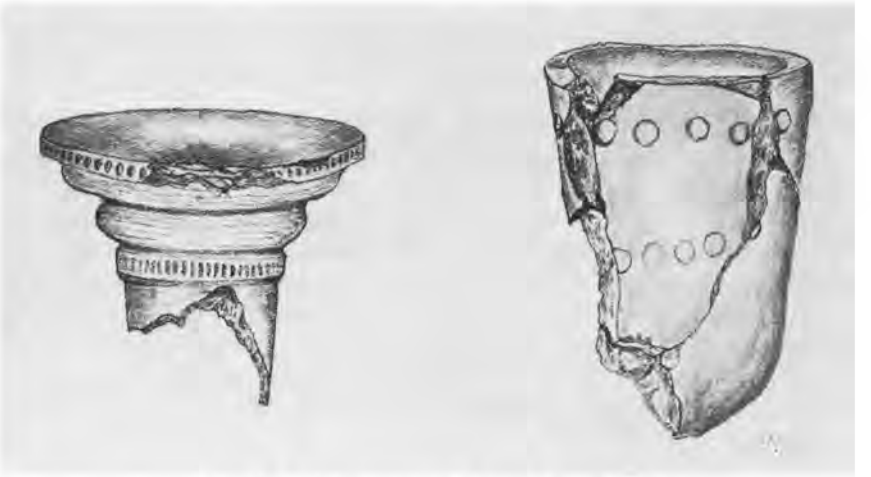
The pottery sample has not been analyzed yet, but Seneca and Cayuga-like varieties appear to be common. Decoration is by notches or incising and signs of cord-wrapped stick impressions are entirely lacking. Pottery pipes are primarily trumpet shaped with or without decoration.

Upon the evidence alone of the trumpet-shaped pipes, Seneca and Cayuga-like pottery, the small thin triangular projectile points, and the absence of European trade goods, the site can be termed Prehistoric Iroquois. The question of importance, however, is where in the Prehistoric Iroquoian sequence in the Bristol Hills does Can 29-3 belong?

The Hummel Site has been described as a possible "link" site (MacNeish 1952:83), (Guthe 1955:11) between the older Owasco and the early Iroquois cultures on the basis of the existence of pottery decorated with Iroquois-like designs formed by the characteristic Owasco cord-wrapped stick impressions. Up to this date the writer has not seen any sherds of this type of pottery from either the Fletcher Site or Can 29-3. Therefore, if one were to utilize the MacNeish *in situ* hypothesis of Iroquoian development the Hummel Site would be the earliest in the Bristol Hills sequence under consideration. The Fletcher Site and Can 29-3 appear to be, on the basis of artifact comparison, later and on the same time level. The Wheeler and Andrews Sites are still to be studied.

In assessing the sites in the Bristol Hills it must be realized that it is easy to make the mistake of developing a theoretical framework involving a major center of Iroquoian development just because sites have been investigated in one particular area. Work must be done in all directions from this area

Cross sections of post molds in eastern palisade line. Can 29-3



Pipe bowl fragments from Can 29-3

LEFT: ***Trumpet shaped — Rochester Museum Collection***
RIGHT: ***Bell shaped — Alton J. Parker Collection***

in order to determine relationship with other centers of Iroquoian development during the same time period.

Dr. William A. Ritchie still maintains (1961*a*:35) that overall Iroquoian cultural development is still obscure. Perhaps the excavations at Can 29-3 and the proposed future Bristol area investigations of the Prehistoric Iroquois will help to clarify one segment of the problem. When added to the information gathered by other workers over the large area composing New York State then local developments, exemplified by Can 29-3, may fit into a meaningful pattern.

References

Guthe, Alfred K.: 1955 "The Hummel Site (Can 29-3)," *Museum Service*, Vol. 28, No. 1, pp. 10-11, Bulletin of the Rochester Museum of Arts and Sciences, Rochester, N. Y.

Guthe, Alfred K.: 1960 "An Early Iroquois Center," *Eastern States Archeological Federation Bulletin*, No. 19, p. 16, Trenton, N. J.

MacNeish, Richard S.: 1952 *Iroquois Pottery Types*, Bulletin 124, National Museum of Canada, Ottawa.

Ritchie, William A.: 1961*a* "Iroquoian Archeology and Settlement Patterns," W. N. Fenton and John Gulick (eds.), *Symposium on Cherokee and Iroquois Culture*, Bulletin 180, Smithsonian Institution Bureau of American Ethnology, pp. 27-38, Washington.

Ritchie, William A.: 1961*b* *A Typology and Nomenclature for New York Projectile Points*, New York State Museum and Science Service Bulletin 384, Albany.

Birthstones

By Gladys Reid Holton, *Curator of History*

IN PLANNING an exhibit to show the birthstones for each month of the year, the research seemed so interesting that it is being included in the *Museum Service*.

The origin of the belief that each month of the year had a special stone and that it was endowed with a peculiar meaning for those born in that month may be traced back to the writings of Josephus, in the first century and to those of St. Jerome, in the early part of the fifth century. There does not seem, however, to be any record of the use of natal stones until some time during the eighteenth century, when the custom was in use in Poland.

In Revelations, which is a book of faith in the eventual triumph of the Kingdom of God, there is, in the 21st Chapter, a description of the vision which John had of the New Jerusalem. He records it thus:

"He who talked with me had a gold measuring rod with which to measure the city and the length, breadth and heighth of the wall was 144 cubits (216 feet). (Another translation—'The city lieth foursquare and the length is as large as the breadth and the city measured 1200 furlongs.') The material of the wall was jasper and the streets of the city were pure gold with gates of pearl. There were 12 foundation stones in the wall of the city. The first foundation stone was jasper; the second, sapphire; the third, chalcedony; the fourth, emerald; the fifth, sardonyx; the sixth, sardius; the seventh, chrysolite; the eighth, beryl; the ninth, topaz; the tenth, chrysoprasus; the eleventh, jacinth; the twelfth, an amethyst." This list of foundation stones is probably based upon the much earlier list of stones adorning Aaron's breastplate—(Exodus 28: verses 15 through 20).

Although nearly all of the gemstones mentioned in the Bible bear names which are still in use, it does not follow that the species represented are the same. One authority says that, "Since the High-Priest's breastplate which was taken to Rome after the destruction of Jerusalem, has disappeared and one series figured in a dream, we have nothing material available to enable us to identify the mineral series represented." There are two early references —one on stones, in Greek by Theophrastus, who died 287 B.C., the other on natural history, in Latin, by Pliny the Elder, published 77 A.D. It is possible that the following names included the stones still so known today: amethyst, emerald, beryl, sard, onyx and sardonyx. Many are almost certainly different.

Down through the ages the foundation stones became eventually associated with the months of the year and were adopted as the birthstones for that month. Then, as is true of many customs, they were changed and adapted until the research revealed a different list for the Jews, the Romans, the

Arabians, the Poles, the Russians and the Italians. In tabulating the results from lists found, the following shows which stones were most favored:

January	Garnet 7	Hyacinth 2	
February	Amethyst 8	Hyacinth 1	Pearl 1
March	Jasper 5	Bloodstone 4	
April	Sapphire 7	Diamond 2	
May	Agate 5 Carnelian 1	Emerald 4	Chalcedony 1
June	Emerald 4 Turquoise 1	Agate 4 Pearl 1	Chalcedony 3 Cat's Eye 1
July	Onyx 5 Ruby 1	Sardonyx 1 Turquoise 1	Carnelian 1
August	Carnelian 5 Topaz 1	Sardonyx 3 Alexandrite 1	Moonstone 1
September	Chrysolite 6	Sardonyx 2	
October	Beryl 8	Aquamarine 5	Opal 1
November	Topaz 8	Pearl 1	
December	Ruby 6 Bloodstone 1	Turquoise 2	Chrysoprase 1

All of this must have been very confusing to the merchant when trying to sell gems and so due to these many differences and beliefs, and wishing to have some uniformity, the National Association of Jewellers, at a meeting in Kansas City, August 1912, approved a list to be used by them. It has become popular and is now quite generally accepted and is as follows: January, garnet; February, amethyst; March, aquamarine or bloodstone; April, diamond; May, emerald; June, pearl or moonstone; July, ruby; August, sardonyx or peridot; September, sapphire; October, opal or tourmaline; November, topaz; December, turquoise or zircon.

In 1940 there was given a list of birthstones which had been approved by the National Association of Goldsmiths of England. Because it lists an alternate in some of the months it is here included: January, garnet; February, amethyst; March, aquamarine or bloodstone; April, diamond or rock crystal; May, emerald or chrysoprase; June, pearl or moonstone; July, ruby or carnelian; August, peridot or sardonyx; September, sapphire or lapis lazuli; October, opal; November, topaz; December, turquoise.

In the further pursuit of good luck by the wearing of talismanic jewelry one may now add zodiacal or astral gems to the list. These are divided into 12 periods with three cycles each and with several gems for each cycle. The list is too long to be included here but a self-addressed stamped envelope will bring it to you if it is of sufficient interest. One reference, "The Story of Jewelry" by Baerwald and Mahoney says that: "The present age could afford nearly as many examples of faith in talismans as any epoch of the past if persons confessed their real beliefs." And a good text for those who believe in the superstitions is given by Havelock Ellis, "Man lives by the imagination."

Broadening the Horizons of Man

By Armand N. Spitz, *Inventor of the Spitz Planetarium*

IF IT BE TRUE—as for the most part it is—that a museum is a place where the Muses are wooed, a temple of study or a repository for collections of broad general interest in any or all of the sciences and the arts, it is no wonder that, during the latter portion of the first half of this century, more and more museums turned their attention to the stars.

Today, as the world daily recognizes more vividly the infinite implications of living in a universe of limitless space, plus the complications of infinitesimally minute particles which carry their radioactive threat to mankind, in every community there is a growing opportunity for the museum which has a planetarium to meet new needs, both educational and cultural.

Ever since the first planetarium of modern character emblazoned the stars before the eyes of its audience there has been a growing interest in looking aloft at night, and nowadays, with artificial satellites and lunar landings and space probes a matter of daily newspaper reading, more people are looking heavenward with more understanding than ever before in all of human history. It is only a little more than three decades since the first projection planetarium caused its audiences to gasp in astonishment at the exquisite beauty of its illusion. It is less than that time since regular programs were set up by the planetarium operators to cater to the non-scientific public who found these new offerings good. It is even less than that time since the planetarium program has become a well-coordinated adjunct to the teaching of young and old alike, both in a regular school-type activity and in special offerings for adults or special groups.

Now there are some scores of planetariums in museums. In the earlier days, a planetarium was something unto itself—witness the use of the word to describe variously the building in which the instrument was housed, or the chamber within the building where the instrument operated, or the instrument itself. The planetarium experience frequently called for museums where there had been none before, and examples of splendid exhibit areas which grew up around the central dome that later were expanded into more general exhibit fields can be found all over the country and in many other lands.

It is not surprising to find a planetarium housed in a museum of natural history or one devoted to the physical sciences. There is such an amazingly close tie-in between all the observable phenomena of nature and all the laws which pertain on earth and throughout the cosmos that the extension of any of the basic science fields into astronomy can be justified. The close relationship between geology and meterology, between climatology and geography, between celestial mechanics and acoustics or optics paves the way for implementing a tremendous number of non-astronomical subjects by the use of this unique astronomical teaching aid.

It is rather less to be expected, perhaps, but not at all to be wondered at, when a planetarium is wedded to a health, history or art museum. Yet all

of these have been successful liaisons, resulting in a vast amount of unexpected benefit to the communities involved.

It is reasons like these which have been responsible, during the last decade and a half, for the habit-forming practice of visiting museums at far more than normal frequency to witness the changing planetarium programs which have been scheduled. Few people, indeed, are likely to pay more than one or two visits a year to almost any museum, unless it is to make a hasty inspection of a timely or temporary feature. On the other hand, since most museums which operate planetariums have adopted the world-accepted practice of changing programs each month, it is not at all uncommon to find many individuals and groups, both family and school, visiting the star show a number of times each year. While attending the planetarium they are exposed to the changing displays of the museum, and thus are enabled to be more aware than ever before of the way in which the museum keeps up-to-date.

It is reasons like these which have been responsible for the generally accepted fact that the planetarium is, almost without exception, the most popular single drawing card in any museum in the world where a planetarium is offered as a regular museum feature. And if there exists any doubt of the value of such a teaching and entertainment facility, visit a planetarium sometime and heed the questions which are asked and who asks them. Look at the sky some evening when Echo is scheduled to cross the field of view, and see how many are looking with you. Ask the newsboy about the name of our country's largest rocket booster. Ask the postman about the VanAllen radiation belt, or ask the Sunday school class questions about the apogee of an orbit or conditions on the Moon. Some will have positive answers, some will make good guesses—few, if any, will deny knowledge or interest.

Planetariums throughout the world have helped to generate this interest and to supply the information which keeps the interest alive. It is the obligation of the planetarium operator, or the modern-minded museum man, to supply more and more knowledge of space and time and all of the intellect-stimulating phenomena which are in the heavens for the looking. When this is done everywhere, as it is presently being done in some places, the museum will, more than ever, fulfill its historic mission of uplifting and broadening the mental horizons of Man.

COMING EVENT - - -

Worlds of Science — Adult Lecture Series

THE WORLD INSIDE THE ATOM • Gerald Wendt

Wednesday, February 14, 8:15 p.m.

Adult Lecture Series . . .

ACROSS TROPICAL AFRICA — Len Stuttman

Wednesday, January 10, 8:15 p.m.

Highly developed Kenya in the east; vast and turbulent Congo in the center; Liberia, first all-Negro republic in the west. This is tropical Africa translated in magnificent color film.

Youth Activities . . .

Registration for Crafts, Science, Folk Dancing and Drama Workshop

Saturday, January 6, 8:45 a.m. to 11:45 a.m.

After-school programs for juniors 6 to 14 years of age.

ALBERTA OUTDOORS — Edgar T. Jones

Saturday, January 13, 10:30 a.m.

Audubon Screen Tour in a land of great beauty and contrast. Canadian mountains, prairies and vast wilderness areas provide a background for colorful and seldom-seen wildlife.

SIMPLE MACHINES — Arthur J. Schneider

Saturday, January 20, 10:30 a.m.

Treasure Chest of Science demonstrations and talk.

SPECIAL EXHIBITIONS

1st floor — **NOAH'S ARK** — welded sculpture by Judith S. Brown, of New York City. *On exhibit through January*

2nd floor — **ROCHESTER ASTRONOMERS EXPLORE SPACE** — Moon Watch, instruments, charts, graphs and a pictorial exposition by members of the Astronomy Section, Rochester Academy of Science. *On exhibit January 17 through February 15*

THE SOUTHWEST — a collection of oil paintings by De Grazia, some reproduced in "Arizona Highways." *On exhibit January 10 — February 15*

Library — **CHILDHOOD FAVORITES** — Nursery Rhymes and the ABC's from the Museum's collection. *On exhibit through January*

3rd Floor — **THE ROCHESTER SOLDIER GOES TO THE CIVIL WAR** — uniforms, accouterments, documents, diaries, photographs and other personalia from the Museum's collection.

BIRTHSTONES — research material tells the story of origin.

1962 · JANUARY · CALENDAR

1 Monday **NEW YEAR'S DAY — MUSEUM CLOSED**

2 Tuesday Rochester Rose Society — 8 p.m. Rochester Numismatic Ass'n — 8 p.m.
Rochester Opportune Club — 8 p.m.

3 Wednes. Genesee Cat Fanciers Club — 8 p.m. Rochester Aquarium Society — 8 p.m.

4 Thursday Rochester Cage Bird Club — 8 p.m. Rochester Dahlia Society — 8 p.m.
Rochester Academy of Science—Mineral — 8 p.m.

5 Friday Rochester Academy of Science—Astronomy — 8 p.m.
Rochester Amateur Radio Code Class — 8 p.m.

6 Saturday **Registration, Junior Museum Activities in crafts, science, folk dancing and drama workshop — 8:45 to 11:45 a.m.**

7 Sunday FILM PROGRAM — 2:30 and 3:30 p.m. — MY MAJORCA, TALENTED HANDS, GEOLOGIC WORK OF ICE

9 Tuesday Rochester Museum Hobby Council — 8 p.m.
Rochester Academy of Science—Botany — 8 p.m.

10 Wednes. Seneca Zoological Society — 8 p.m.
Rochester Academy of Science—Ornithology — 8 p.m.
Illustrated Lecture — ACROSS TROPICAL AFRICA by Len Stuttman — Adult Series, Rochester Museum Ass'n — 8:15 p.m.

11 Thursday Junior Philatelic Club — 7 to 9 p.m. Rochester Philatelic Ass'n — 8 p.m.
Rochester Amateur Radio Ass'n — 8 p.m.

12 Friday Rochester Amateur Radio Code Class — 8 p.m.
Burroughs Audubon Nature Club — 7:45 p.m.

13 Saturday **AUDUBON SCREEN TOUR — ALBERTA OUTDOORS by Edgar T. Jones —** Youth Series, Rochester Museum Ass'n — 10:30 a.m.

14 Sunday FILM PROGRAM — 2:30 and 3:30 — THE STORY OF PETER AND THE POTTER, RHINE RIVER, LANDS OF THE FALLING WATERS

16 Tuesday Rochester Numismatic Ass'n — 8 p.m. Rochester Button Club — 1 p.m.
Rochester Opportune Club — 8 p.m.

17 Wednes. Monroe County Hooked Rug Guild — 10 a.m. Rochester Print Club — 8 p.m.
Upper N.Y.S. Branch, National Chinchilla Breeders — 8 p.m.
Genesee Weavers — 8 p.m.

18 Thursday Genesee Valley Gladiolus Society — 8 p.m.

19 Friday Rochester Amateur Radio Code Class — 8 p.m.
Rochester Academy of Science—Weather—8 p.m.
Junior Numismatic Club — 7:30 p.m.
Genesee Valley Antique Car Society — 8 p.m.

20 Saturday **TREASURE CHEST OF SCIENCE — 10:30 a.m. — SIMPLE MACHINES by Arthur J. Schneider, Head of Science Dept., Ridgewood Jr. High School**

21 Sunday FILM PROGRAM — 2:30 and 3:30 p.m. — EXPLORING BY SATELLITE, FREEDOM TO READ

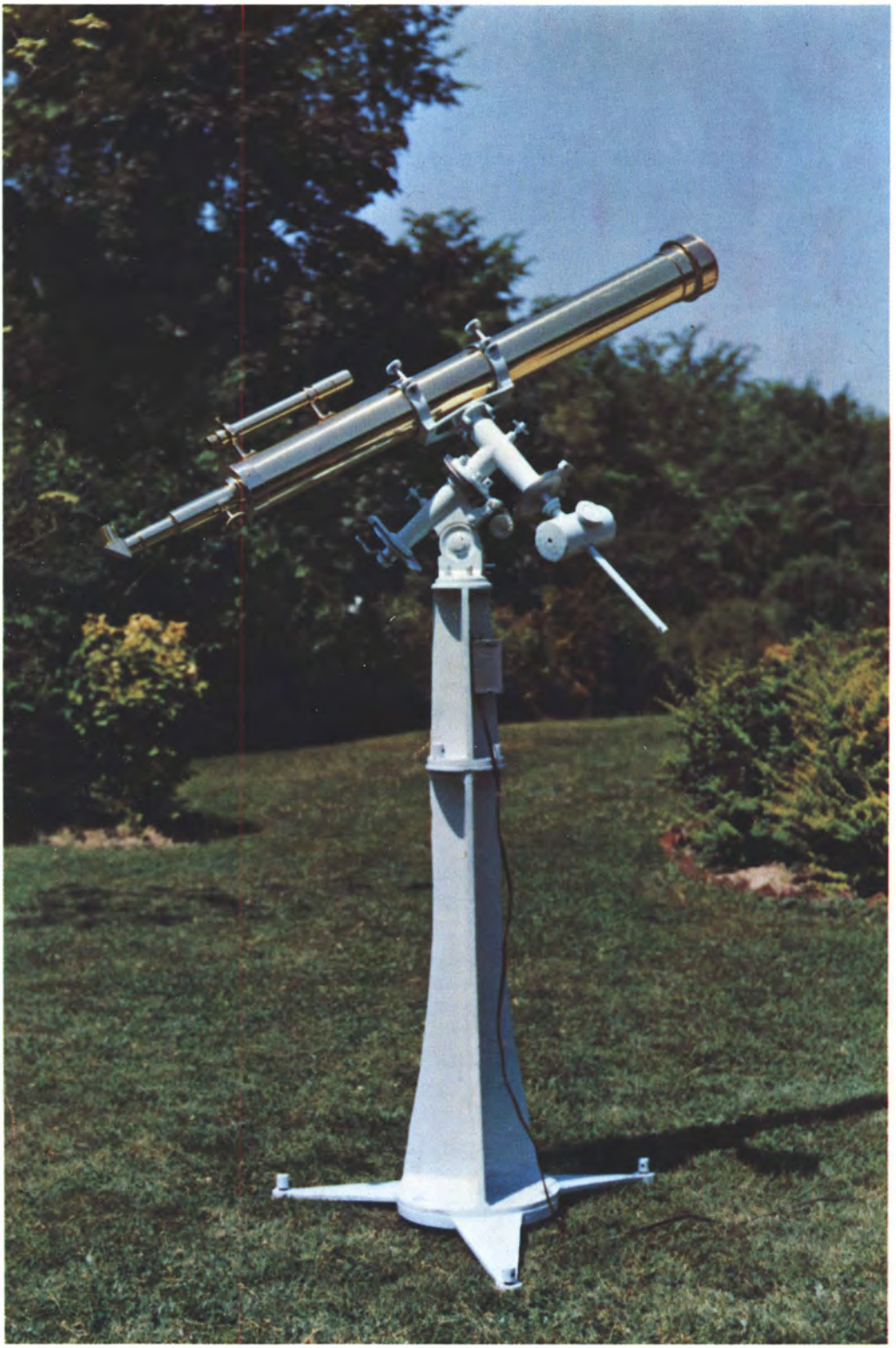
23 Tuesday Rochester Antiquarian League — 8 p.m
Optical Society of America — 8 p.m.

25 Thursday Rochester Philatelic Ass'n — 8 p.m. Junior Philatelic Club — 7 to 9 p.m.
Genesee Valley Quilt Club — 10:30 a.m.

26 Friday Rochester Amateur Radio Code Class — 8 p.m.
Burroughs Audubon Nature Club — 7:45 p.m.

28 Sunday FILM PROGRAM — 2:30 and 3:30 p.m. — ADELIE PENGUINS OF THE ANTARCTIC, EXPLORER IN SPACE, ARGENTINA'S LIFESTREAM

——All bookings subject to change and substitution without notice.



Museum Telescope: ***Harvey 4" Refractor***